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EXAMINER

JIMENEZ, MARC QUEMUEL

ART UNIT PAPER NUMBER

3726

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11

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/926,562

Applicant(s)

OHGOSHI ET AL.

Examiner

Marc Jimenez

Art Unit

3726

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) 13,38 and 39 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12,14-37,40 and 41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 February 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6,7. 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Species A and C in Paper No. 10 is acknowledged.
2. **Claims 13, 38, and 39** are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim.

Priority

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

4. Figures 25-30 and 34-38 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

5. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed

Art Unit: 3726

150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Objections

6. **Claim 7** is objected to because of the following informalities: "the step" in line 2 should be - - the steps - -. Appropriate correction is required.
7. **Claim 11** is objected to because of the following informalities: "the step" in lines 1-2 should be - - the steps - -. Appropriate correction is required.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. **Claims 1-16 and 30-37, 40 and 41** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites "the resin roller has the core body of the same outer diameter" in lines 8-9 which is unclear.

Claim 1 recites "a roller forming space" in the last two lines. It is unclear what this limitation encompasses.

Claim 2 recites “grooves are defined for attaching E-rings”. This limitation is unclear because claim 1 recites “core body of the same outer diameter over a full length”. Claim 1 limits the roller body to have no change in diameter over the full length of the core body. However, “grooves” in claim 2 imply that there is a change in the diameter of the core body because the groove section has a reduced diameter as shown at 23 in applicant’s fig . 1.

Claim 3 recites “the cylindrical member” in line 2 which lacks proper antecedent basis.

Claim 5 recites “the core body is defined with grooves for attaching the sealing members” in lines 2-3. This limitation is unclear because claim 1 recites “core body of the same outer diameter over a full length”. Claim 1 limits the roller body to have no change in diameter over the full length of the core body.

Claim 6 recites “the core body” in line 1, “the sealing members” in line 4, and “the resin-formed body” in line 6 which lack proper antecedent basis.

Claim 6 recites “or project” in the last line which lacks proper antecedent basis.

Claim 7 recites “the resin roller” in line 1, the “core supporting members” in line 2, “the cylindrical metal mold” in line 3, “the core body” in lines 3-4, “both core supporting members” in line 4, “the forming resin” in line 5, “the roller forming space” in lines 5-6, “the sealing members” in line 9, “the edge parts” in line 10, “the resin-formed body” in lines 10-11, “the sides” in line 12, and “the roller forming space” in line 12 which lack proper antecedent basis.

Claim 8 recites “the roller main body” in line 2, “the core body” in line 3, “the roller main body” in line 4, “the resin layers” in line 5, and “the surface” in the last line which lack proper antecedent basis.

Claim 10 recites “the part” in line 2 which lacks proper antecedent basis.

Art Unit: 3726

Claim 10 recites “the resin layer is 1 to 40 times of a swelling amount of the edge part having a larger diameter than the central part of the formed roller main body” in the last 3 lines. It is unclear what this limitation encompasses. Specifically, it is unclear what the final structural features of the roller product is.

Claim 11 recites “the core body” in line 2, “the forming metal mold” in line 2, “the thermosetting liquid resin” in line 3, “the resin layers” in lines 8 and 9-10, and “the surface layer” in line 9 which lack proper antecedent basis.

Claim 15 recites “the swelling amount” in line 2 which lacks proper antecedent basis.

Claim 15 recites “the swelling amount of the edge part in comparison with that of the center part of the formed roller body is 1”. It is unclear what this limitation encompasses.

Claim 15 recites “the diameter direction and the axial” in the second to last line which lack proper antecedent basis.

Claim 30 recites “the core body” in line 3, “core supporting members” in line 3, “both edge parts” in line 4, “the inside” in lines 5-6, “the resin material” in line 7, “the injection forming metal mold” in lines 8-9, and “the roller forming space” in line 9 which lack proper antecedent basis.

Claim 35 recites “the core body” in line 2 which lacks proper antecedent basis.

Claim 36 recites “the forming metal mold” in line 2 which lacks proper antecedent basis.

Claim 40 recites “the cylindrical metal mold” in lines 1-2 and “the core body” in line 2 which lack proper antecedent basis.

Claim 41 recites “the diameter” in line 3 which lacks proper antecedent basis.

The above are examples of 35 U.S.C. 112 2nd paragraph problems in the claims. All of the claims should be carefully checked so that they conform with 35 U.S.C. 112 2nd paragraph.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. **Claims 1 and 3-6** are rejected under 35 U.S.C. 102(b) as being anticipated by JP 1-98312 ('312).

'312 teaches a resin roller having a core body **10** with the same outer diameter over a full length and a cylindrical resin-formed body **11**, sealing members **11a or 13** furnished around the core body **10** in the vicinity of both edge parts of the resin-formed body **11**, and the core body **10** is disposed such that the sealing members **11a or 13** contact edge faces at sides of a roller forming space. Note that the patentability of a product does not depend on its method of production. *In re Thorpe*, 777 F.2d 695, 697, 227 USPQ 964, 966 (Fed. Cir. 1985) (citing *In re Pilkington*, 411 F.2d 1345, 1348, 162 USPQ 145, 147 (CCPA 1969)). If a product in a product-by-process claim is the same as or obvious from a product in the prior art, the claim is unpatentable even though the prior product is made by a different process. *Id.* citing *In re Marosi*, 710 F.2d 799, 803, 218 USPQ 289, 292-93 (Fed. Cir. 1983); *Johnson & Johnson v. W.L.*

Art Unit: 3726

Gore, 436 F. Supp. 704, 726, 195 USPQ 487, 506 (D. Del. 1977); see also *In re Fessmann*, 489 F.2d 742, 744, 180 USPQ 324, 326 (CCPA 1974).

Regarding claims 3 and 4, the sealing members **11a or 13** are provided to the core body **10**.

Regarding claim 5, the core body **10** is defined with grooves **10a** for attaching the sealing members.

Regarding claim 6, the sealing members are disposed around the core body **10** in the vicinity of both edges of the resin-formed body **11** and edge faces of the sealing members **11a** are the same as edge faces of the resin formed body (the edge faces are in the vicinity of lead line **11a** in fig. 1).

12. **Claims 7, 17, 18, 40, and 41** are rejected under 35 U.S.C. 102(b) as being anticipated by Takahashi (5,089,201).

Takahashi teaches a method of producing a resin roller comprising the steps of disposing core supporting members **20,22** at both edge parts of a cylindrical metal mold **10** and holding a core body **26** with both core supporting members **20,22**, and pouring forming resin **50** into the roller forming space **12** formed between the cylindrical metal mold **10** and the core supporting members **20,22** and solidifying the forming resin **50** to form a resin-formed body **50** around the core body **26**, characterized by disposing sealing members **40** around the core body **26** in the vicinity of the edge parts of the resin-formed body **50**, elastically contacting the sealing members **40** to the sides of the roller forming space of the core support members **20,22**, and, under this condition, pouring the forming resin **50** into the roller forming space.

Regarding claim 17, note the metal mold **10** having a structure disposed with core supporting members **20,22** holding a roller forming space therebetween at both ends of a cylindrical metal mold **10** inserted inside with the core body **26**, characterized in that the core supporting member **20,22** is provided with a mold-inner pressure adjusting mechanism (col. 2, lines 1-2).

Regarding claim 18, note the volume-variable spare room **30A** communicating with the roller forming space **12**.

Regarding claim 40, note the ring shaped concave groove **22B** formed at an opening edge of a core holding hole provided in the core supporting member **22**, the groove **22B** being larger in diameter than an outer diameter of the core body **26B** to be inserted in the core holding hole.

Regarding claim 41, the ring shaped concave groove **22B** reduces in diameter.

13. **Claims 8, 10, and 35-37** are rejected under 35 U.S.C. 102(b) as being anticipated by Tavelle et al. (3,941,635).

Tavelle et al. teach a resin roller formed in the roller main body by providing a cylindrical resin layer **14** around the core body **12**, and the roller main body is chamfered or rounded **A** at corners of edge parts of the resin layer **14**, and the resin layer **14** is formed on the surface with a surface layer **16b**.

Regarding claim 10, Tavelle et al. meet the claimed structural limitations of the final product. Furthermore, the patentability of a product does not depend on its method of production. *In re Thorpe*, 777 F.2d 695, 697, 227 USPQ 964, 966 (Fed. Cir. 1985) (citing *In re Pilkington*, 411 F.2d 1345, 1348, 162 USPQ 145, 147 (CCPA 1969)). If a product in a product-by-process

Art Unit: 3726

claim is the same as or obvious from a product in the prior art, the claim is unpatentable even though the prior product is made by a different process. Id. citing *In re Marosi*, 710 F.2d 799, 803, 218 USPQ 289, 292-93 (Fed. Cir. 1983); *Johnson & Johnson v. W.L. Gore*, 436 F. Supp. 704, 726, 195 USPQ 487, 506 (D. Del. 1977); see also *In re Fessmann*, 489 F.2d 742, 744, 180 USPQ 324, 326 (CCPA 1974).

Regarding claim 35, Tavelle et al. teach a resin roller formed with a cylindrical resin-formed body **14** around a core body **12**, characterized in that the resin-formed body **14** is formed as standing along the core body **12** toward the edge of the core body **12**.

Regarding claim 36, the patentability of product does not depend on its method of production. *In re Thorpe*, 777 F.2d 695, 697, 227 USPQ 964, 966 (Fed. Cir. 1985) (citing *In re Pilkington*, 411 F.2d 1345, 1348, 162 USPQ 145, 147 (CCPA 1969)). If a product in a product-by-process claim is the same as or obvious from a product in the prior art, the claim is unpatentable even though the prior product is made by a different process. Id. citing *In re Marosi*, 710 F.2d 799, 803, 218 USPQ 289, 292-93 (Fed. Cir. 1983); *Johnson & Johnson v. W.L. Gore*, 436 F. Supp. 704, 726, 195 USPQ 487, 506 (D. Del. 1977); see also *In re Fessmann*, 489 F.2d 742, 744, 180 USPQ 324, 326 (CCPA 1974).

Regarding claim 37, the standing state of the resin formed body reduces a diameter in arc A toward the edge of the core body.

14. **Claims 30-33** are rejected under 35 U.S.C. 102(b) as being anticipated by Nauta (3,619,446).

Nauta teaches an apparatus of injection-forming roller characterized by having a

Art Unit: 3726

cylindrical metal mold **24** inserted inside with a core body **30** and core supporting members **34** detachably fitted to both edge parts in the axial direction of the cylindrical metal mold **24** as holding both edges of the inside inserted core body **30**, and is composed by disposing heating mechanisms **44** for hot-setting the resin material **71** introduced in a roller forming space **28** around the injection forming metal mold **24** having the roller forming space **28**, the core supporting member **34** having a first obliquity **26** tilting at a fixed angle with respect to an axial and vertical directions in the outer wall face, and the heating mechanism **44** having an inner wall contacting to hold the injection forming metal mold **24** under a condition of closing the heating mechanism **44** and having a second obliquity (below **56**) pressing the first obliquity **24** to the inner wall face, whereby the injection forming metal mold **24** is tightened and held (col. 3, line 39).

Regarding claims 31 and 33, note the pawl/elastic member **56**.

15. **Claims 35 and 36** are rejected under 35 U.S.C. 102(b) as being anticipated by Uchida (JP 3-161311).

Uchida teaches a resin roller formed with a cylindrical resin-formed body **1** around a core body **6**, characterized in that the resin-formed body **1** is formed as standing along the core body **6** toward the edge of the core body **6**.

Regarding claim 36, the patentability of product does not depend on its method of production. *In re Thorpe*, 777 F.2d 695, 697, 227 USPQ 964, 966 (Fed. Cir. 1985) (citing *In re Pilkington*, 411 F.2d 1345, 1348, 162 USPQ 145, 147 (CCPA 1969)). If a product in a product-by-process claim is the same as or obvious from a product in the prior art, the claim is

Art Unit: 3726

unpatentable even though the prior product is made by a different process. Id. citing *In re Marosi*, 710 F.2d 799, 803, 218 USPQ 289, 292-93 (Fed. Cir. 1983); *Johnson & Johnson v. W.L. Gore*, 436 F. Supp. 704, 726, 195 USPQ 487, 506 (D. Del. 1977); see also *In re Fessmann*, 489 F.2d 742, 744, 180 USPQ 324, 326 (CCPA 1974).

Claim Rejections - 35 USC § 103

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17. **Claims 2** is rejected under 35 U.S.C. 103(a) as being unpatentable over ‘312 in view of Verboom et al. (4,325,170).

‘312 teaches the invention cited with the exception of having grooves for attaching the E-rings **13**.

Verboom et al. teach grooves for attaching E-rings (see to the right of element **9** in fig. 3).

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of ‘312 with grooves for attaching the E-rings, in light of the teachings of Verboom et al., in order to securely fasten the E-rings to the core body. Note that the rings **15** of ‘312 contact sealing members **11a**.

Art Unit: 3726

18. **Claim 9** is rejected under 35 U.S.C. 103(a) as being unpatentable over Tavelle et al. in view of Saito et al. (5,934,663).

Tavelle et al. teach the invention cited with the exception of the hardness of the resin layer being 25 or lower JIS-A.

Saito et al. teach that it is known to use resin layers that have 25 or lower JIS-A (col. 3, lines 47-48).

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Tavelle et al. with a resin having a 25 or lower JIS-A, in light of the teachings of Saito et al., in order to provide a resin layer having the desired combination of hardness and durability. Furthermore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have selected the claimed material, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416. See also *Ballas Liquidating Co. v Allied industries of Kansas, Inc.* (DC Kans) 205 USPQ 331.

19. **Claims 11, 12, 15, and 16** are rejected under 35 U.S.C. 103(a) as being unpatentable over Namiki (4,313,981) in view of Takahashi and Scholz et al. (5,660,092).

Namiki teaches a method of producing a resin roller comprising the steps of forming a roller main body furnished with a cylindrical resin layer **21** around the core body **25**, with the resin layer having chamfered or rounded corners **13**, and forming a surface layer **27** around the resin layer **21**.

Namiki teaches the invention cited with the exception of disposing the core body in a forming metal mold and pouring thermosetting liquid resin into the metal mold for hot-setting, and it is unclear when the chamfered or rounded corners 13 of Namiki are formed.

Takahashi teaches that it is known to dispose a core body 26 in a forming metal mold 10 and pouring thermosetting liquid resin (col. 3, lines 26-27) into the mold 10 for hot setting (col. 3, lines 37-38).

Scholz et al. teach that it is known to machine a formed layer 6 to obtain the desired layer configuration.

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Namiki with the steps of disposing the core body in a forming metal mold and pouring thermosetting liquid resin into the metal mold for hot-setting, in light of the teachings of Takahashi, in order to form a symmetrical resin layer.

Furthermore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Namiki/Takahashi with chamfering or rounding an already molded layer, in light of the teachings of Scholz et al., in order to accurately form the desired layer configuration.

Regarding claim 12, at the time of the invention, it would have been an obvious matter of design choice to a person of ordinary skill in the art, to have used heating to fuse and remove resin because applicant has not disclosed that heating to fuse and remove resin provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected applicant's invention to perform equally well with either the material removing steps taught by Scholz et al. or the claimed heating to fuse because

Art Unit: 3726

either removing processes perform the same function of removing material equally well.

Furthermore, official notice is taken that it is well known in the art to remove material by heating to fuse and remove resin.

Regarding claim 15, it is inherent that the resin will swell during forming the resin layer.

Regarding claim 16, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have selected the claimed material, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416. See also *Ballas Liquidating Co. v Allied industries of Kansas, Inc.* (DC Kans) 205 USPQ 331.

20. **Claim 14** is rejected under 35 U.S.C. 103(a) as being unpatentable over Namiki in view of Takahashi and Scholz et al. as applied to claim 11 above, and further in view of Saito et al.

Namiki/Takahashi/Scholz teach the invention cited with the exception of the hardness of the resin layer being 25 or lower JIS-A.

Saito et al. teach that it is known to use resin layers that have 25 or lower JIS-A (col. 3, lines 47-48).

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Namiki/Takahashi/Scholz with a resin having a 25 or lower JIS-A, in light of the teachings of Saito et al., in order to provide a resin layer having the desired combination of hardness and durability. Furthermore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have selected the claimed material, since it has been held to be within the general skill of a worker in the art to select a known material on

Art Unit: 3726

the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416. See also *Ballas Liquidating Co. v Allied industries of Kansas, Inc.* (DC Kans) 205 USPQ 331.

21. **Claim 19** is rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi.

Takahashi teaches the invention cited with the exception of the claimed shrinkage factor range and thickness of the elastic layer range.

It would have been obvious to one of ordinary skill in the art at the time of the invention, to have made the prior art at the claimed ranges, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

22. **Claim 20** is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Takahashi.

It is inherent that the mold-inner pressure during hot-setting is adjusted to be 100 kg/cm² or lower because this range could mean a pressure of 0 with no pressure being applied. The Takahashi device is clearly capable of having zero pressure. Alternatively, it would have been obvious to one of ordinary skill in the art at the time of the invention, to have made the prior art at the claimed ranges, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

23. **Claims 21-29** are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi in view of Sonobe et al. (5,033,380).

Takahashi teaches the invention cited with the exception of storing separately a hardening type liquid resin containing a cross linking agent and a hardening type liquid resin containing a catalyst, respectively measuring to be set amounts thereof and then pouring the resin into the space.

Sonobe et al. teach that it is known to mix different types of resin and then pouring the resin into a mold space (col. 2, lines 46-50). It is inherent that the different resins are stored in different containers.

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Takahashi with storing separately a hardening type liquid resin containing a cross linking agent and a hardening type liquid resin containing a catalyst, respectively measuring to be set amounts thereof and then pouring the resin into the space, in light of the teachings of Sonobe et al., in order to obtain the desired physical properties of the resin layer. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have selected the claimed material, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416. See also *Ballas Liquidating Co. v Allied industries of Kansas, Inc.* (DC Kans) 205 USPQ 331.

Regarding claims 22-24, 27, and 28, it would have been obvious to one of ordinary skill in the art at the time of the invention, to have made the prior art at the claimed ranges, since it has been held that where the general conditions of a claim are disclosed in the prior art,

Art Unit: 3726

discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Regarding claims 24, 25 and 29, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have selected the claimed material, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416. See also *Ballas Liquidating Co. v Allied industries of Kansas, Inc.* (DC Kans) 205 USPQ 331.

24. **Claim 34** is rejected under 35 U.S.C. 103(a) as being unpatentable over Nauta.

Nauta teaches the invention cited with the exception of the claimed ranges of tilt angle. It would have been obvious to one of ordinary skill in the art at the time of the invention, to have made the prior art at the claimed ranges, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233. Furthermore, official notice is taken that it is well known in the art to have made the tilt angle the claimed ranges.

Contact Information

25. Telephone inquiries regarding the status of applications or other general questions, by persons entitled to the information, should be directed to the group clerical personnel. In as much as the official records and applications are located in the clerical section of the examining

Art Unit: 3726

groups, the clerical personnel can readily provide status information. M.P.E.P. 203.08. The Group clerical receptionist number is (703) 308-1148.

If in receiving this Office Action it is apparent to applicant that certain documents are missing, e.g., copies of references cited, form PTO-1449, form PTO-892, etc., requests for copies of such papers or other general questions should be directed to Tech Center 3700 Customer Service at (703) 306-5648, or fax (703) 872-9301 or by email to CustomerService3700@uspto.gov.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc Jimenez whose telephone number is **703-306-5965**. The examiner can normally be reached on **Monday-Friday, between 5:30 am- 2:00 pm**. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 703-308-1789. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306 for regular communications and After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1148.

Other helpful telephone numbers are listed for applicant's benefit.

Allowed Files & Publication	(703) 308-6789 or (888) 786-0101
Assignment Branch	(703) 308-9723
Certificates of Correction	(703) 305-8309
Drawing Corrections/Draftsman	(703) 305-8404/8335
Petitions/Special Programs	(703) 305-9285
Terminal Disclaimers	(703) 305-8408
PCT Help Desk	(703) 305-3257

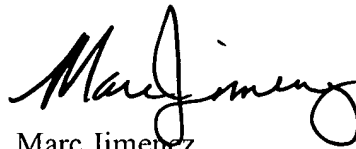
Application/Control Number: 09/926,562
Art Unit: 3726

Page 19

If the information desired is not provided above, or a number has been changed, please call the general information help line below.

Information Help line
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<http://www.uspto.gov/>

A handwritten signature in black ink, appearing to read "Marc Jimenez", with a stylized, flowing script.

Marc Jimenez
Patent Examiner
AU 3726

MJ
January 23, 2004